Uses of Error

DELAYED TREATMENT OF DISTAL TIBIAL FRACTURE LEADING TO PSEUDOARTHROSIS: A CASE REPORT

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SUMMARY: 62 years old man with hypertension, diabetes mellitus and renal failure had a multidrug-resistant skin infection with displaced distal tibia fracture. Conservative treatment was considered due to the infection. Although the infection resolved two weeks after treatment with antibiotics, surgical treatment has not been applied. Reflex sympathetic dystrophy and pseudoarthrosis has occurred on 5th months of the fracture. We think that the operation should have been done as soon as the infection resolved.

Key Words: Fracture, pseudoarthrosis, tibia.

INTRODUCTION

Pseudarthrosis is a false joint associated with abnormal movement of bones at the site of a inadequately healed fracture. Malunion and nonunion of an ankle fusion site are associated with pain, limbs length discrepancy, and deformity. Operative treatment has been used to treat these challenging problems (1, 2). We presented a case of nonunion due to choosing incorrect treatment modality.

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CASE REPORT

A skin infection started on the right leg of a 62 years old man who has essential hypertension and type 2 diabetes mellitus for 30 years. He also has end stage renal failure recieving hemodialysis for 4-5 years. He was hospitalized in another center for cellulitis infection and antibiotics were started. Diagnosis of deep venous thrombosis has been ruled out. His infection and hospitalization was prolonged and on his 12th day of hospitalization, he had a fall and was found to have right displaced distal tibial fracture. Conservative treatment was chosen due to the concomitant infection. Although his infection recovered on his 30th day of hospitalization, conservative

Figure 1: Anteroposterior x-ray of right ankle shows pseudoarthrosis of distal tibia.

Figure 2: Lateral x-ray of right ankle shows pseudoarthrosis of distal tibia.

treatment was continued. After he was discharged from the hospital he went to other centers for follow up. At the end of 5 months he presented to our department with pseudoarthrosis (Figures 1 and 2). He was unable to walk and his ankle was deformed. Reflex sympathetic dystrophy was also noted.

We operated on the patient with external fixation method and autograft was used from his iliac bone. The deformity was also corrected (Figures 3-5).

Figure 3: Anterior view of patient's right ankle after operation.

Figure 4: Lateral view of patient's right ankle after operation.

Figure 5: Anteroposterior x-ray of the patient's right ankle after operation

DISCUSSION

Decision making for treatment of distal tibia fracture mostly depends on displacement of fracture and ligamentous injury. We think that most of orthopedic surgeons would prefer surgical treatment if there is no contraindication. The main reasons for surgery are marked displacement and relation of fracture line with the ankle joint.

Conservative treatment choice was obligatory in the beginning because of the infection. On the other hand, surgical treatment should have been done as soon as the infection resolved.

There are many operative techniques for treatment of distal tibial fracture. This includes: Ilizarov technique, external fixation, intramedullary nailing, open reduction and internal fixation.

It should not be forgotten that diabetes and renal failure are important known predisposing factors for pseudoarthrosis.

In conclusion, we think that this patient should have been operated on as soon as infection resolved.

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